Federal Funding Opportunity
National Institute of Standards and Technology
FY 2006 Small Grants Programs

Overview Information

1. Federal Agency Name(s): Department of Commerce, National Institute of Standards and Technology

2. Funding Opportunity Title: Small Grant Program for (1) Electronics and Electrical Engineering Laboratory (EEEL); (2) the Manufacturing Engineering Laboratory (MEL); (3) the Chemical Science and Technology Laboratory (CSTL); (4) the Physics Laboratory; (5) the Materials Science and Engineering Laboratory (MSEL); (6) the Building Research Program; (7) the Fire Research Program; and (8) the Information Technology Laboratory (ITL) Program.

3. Announcement Type: Initial Announcement

4. Funding Opportunity Number: 2006-SGP-01

5. Catalog of Federal Domestic Assistance (CFDA) Number(s): 11.609

6. Dates: For MEL, CSTL, Physics, MSEL, ITL and the Building Research Program: All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Standard Time on September 30, 2006. Proposals received between July 1, 2006 and September 30, 2006 may be processed and considered for funding under this solicitation in the next fiscal year, subject to the availability of funds.

For EEEL: All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Standard Time on June 30, 2006.

For the Fire Research Program - All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Standard Time on September 30, 2006. Proposals received between May 1, 2006 and September 30, 2006 will be processed and considered for funding under this solicitation, but if selected, proposals may be funded in the next fiscal year, subject to the availability of funds.

Executive summary: The National Institute of Standards and Technology (NIST) announces that the following programs are soliciting applications for financial assistance for FY 2006: (1) the Electronics and Electrical Engineering Laboratory Grants Program; (2) the Manufacturing Engineering Laboratory Grants Program; (3) the Chemical Science and Technology Laboratory Grants Program; (4) the Physics Laboratory Grants Program; (5) the Materials Science and Engineering Laboratory Grants Program; (6) the Building Research Grants and Cooperative Agreements Program; (7) the Fire Research Grants Program; and (8) the Information Technology Laboratory (ITL) Grants Program.

Full Text of Announcement

a. Funding Opportunity Description:

Electronics and Electrical Engineering Laboratory (EEEL) Grants Program

The *Electronics and Electrical Engineering Laboratory (EEEL) Grants Program* will provide grants and cooperative agreements for the development of fundamental electrical metrology and of metrology supporting industry and government agencies in the broad areas of semiconductors, electronic instrumentation, radio-frequency technology, optoelectronics, magnetics, video, electronic commerce as applied to electronic products and devices, the transmission and distribution of electrical power, national electrical standards (fundamental, generally quantum-based physical standards), and law enforcement standards.

For details on these various activities, please see the Electronics and Electrical Engineering Laboratory Web site at http://www.eeel.nist.gov.

Technical contacts by area are:

Semiconductors; Electronic commerce: Semiconductor Electronics Division— Division Chief: Dr. David G. Seiler; (301) 975–2054; david.seiler@nist.gov

Office of Microelectronics Programs— Director: Dr. Stephen Knight; (301) 975–4400; stephen.knight@nist.gov

Radio-frequency technology; Superconductors (bulk); Magnetics: Electromagnetics Division—Division Chief: Dr. Dennis S. Friday; (303) 497–3132; friday@boulder.nist.gov

Electronic instrumentation; National electrical standards; Supercondutors (cryoelectronics): Quantum Electrical Metrology Division—Division Chief: Dr. James K. Olthoff; (301) 975–2400; james.olthoff@nist.gov

Optoelectronics; Video: Optoelectronics Division—Division Chief: Dr. Kent Rochford; (303) 497–5485; rochford@boulder.nist.gov

Law enforcement: Office of Law Enforcement Standards—Director: Ms. Kathleen Higgins; (301) 975–2757; kathleen.higgins@nist.gov

Manufacturing Engineering Laboratory (MEL) Grants Program

Program Description: *The Manufacturing Engineering Laboratory (MEL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Dimensional Metrology for Manufacturing, Mechanical Metrology for Manufacturing, Intelligent Systems, and Information Systems Integration for Applications in Manufacturing.

All proposals submitted must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Precision Engineering Division, 821--The primary objective is to support laboratory programs in the areas of Engineering Metrology, Large-Scale Metrology, Nanometer-Scale Metrology, and Surface Metrology. The contact person for this division is: Dr. Dennis Swyt, and he may be reached at (301) 975-3463; dennis.swyt@nist.gov.

B. Manufacturing Metrology Division, 822--The primary objective is to support laboratory programs in Mechanical Metrology; Advanced Optics Metrology; Predictive Process Engineering; and Smart Machine Tools. The contact person for this division is: Mr. Kevin Jurrens, and he may be reached at (301) 975-6600; kevin.jurrens@nist.gov.

C. Intelligent Systems Division, 823--The primary objective is to support laboratory programs in Intelligent Open Architecture Control of Manufacturing Systems, Intelligent Controls of Mobility Systems, and Intelligent Systems. The contact person for this division is: Mr. Albert Wavering, and he may be reached at (301) 975-3418; albert.wavering@nist.gov.

D. Manufacturing Systems Integration Division, 826--The primary objective is to pursue semantics- and ontology-based systems integration technology and standards through support of laboratory programs in Manufacturing Enterprise Integration; Manufacturing Simulation and Visualization; Integrated Simulations for Homeland Defense and Emergency Response; Product Engineering; Healthcare Informatics; and Meso-Micro-Nano-Manufacturing. The contact person for this division is: Dr. Steven R. Ray, and he may be reached at (301) 975-3508; steven.ray@nist.gov.

Chemical Science and Technology Laboratory Grants Program

Program Description: *The Chemical Science and Technology Laboratory (CSTL) Grants Program* will provide grants and cooperative agreements in the following fields of measurement science research, focused on reference methods, reference materials and reference data: Biotechnology, Process Measurements, Surface and Microanalysis

Science, Physical and Chemical Properties, and Analytical Chemistry.

The appropriate Division Chief for each field of research may be contacted for clarification of the program objectives. Additional information about the Divisions and CSTL Programs may be obtained at the following Web site: http://www.cstl.nist.gov/

CSTL is the United States' primary reference laboratory for chemical measurements, entrusted with developing, maintaining, advancing, and enabling the Nation's chemical measurement system, thereby enhancing industry's productivity and competitiveness, establishing comparability of measurements to facilitate equity of global trade, and improving public health, safety, and environmental quality. CSTL focuses its activities in measurement science research on reference methods, reference materials and reference data, and directs these efforts in support of the following specific Program areas aligned with industrial segments and National priorities:

1. Automotive and Aerospace
2. Biomaterials
3. Pharmaceuticals and Biomanufacturing
4. Chemical and Allied Products
5. Environmental Technologies and Services
6. Food and Nutritional Products
7. Forensics and Homeland Security
8. Health and Medical Products and Services
9. Industrial and Analytical Instruments and Services
10. Microelectronics

These Programs are structured to support CSTL's three objectives:

- Provide the national traceability and international comparability structure for measurements in chemistry,chemical engineering, and biotechnology;
- Assure that U.S. industry has access to accurate and reliable data and predictive models to determine the chemical and physical properties of materials and processes;
- Anticipate and address next-generation measurement needs of the Nation.

CSTL conducts its research and is organized along disciplinary lines:

Biotechnology Division: DNA chemistry, sequencing; Protein structure, properties, and modeling; Biomaterials; Biocatalysis and bioprocessing measurements. The contact person for this division is: Dr. Vincent L. Vilker, and he may be reached at (301) 975-2629.

Process Measurements Division: Research, calibration services and provision of primary standards for temperature, pressure, vacuum, humidity, fluid flow, air speed, liquid density and volume, and gaseous leak-rate measurements; Sensor research. The contact person for this division is: Dr. James R. Whetstone, and he may be reached at (301) 975- 2609

Surface and Microanalysis Science Division: Nanoscale chemical characterization; Particle characterization and standards; Electronic and advanced materials characterization; Surface and interface chemistry; Advanced isotope metrology. The contact person for this division is: Dr. Richard R. Cavanagh, and he may be reached at (301) 975-2368.

Physical and Chemical Properties Division: Basic reference data; Data for process and product design; Properties of energy-related fluids; Fundamental studies of fluids; Cryogenic technologies; Computational chemistry. The contact person for this division is: Dr. Gregory Rosasco , and he may be reached at (301) 975-2483 Analytical Chemistry Division: Chemical measurements research and services in: Analytical sensing technologies; Classical analytical methods; Gas metrology; Laboratory automation technology; Nuclear analytical methods; Organic analytical methods; and Spectrochemical measurement methods. The contact person for this division is: Dr. Stephen Wise, and he may be reached at (301) 975-3108.

Physics Laboratory Grants Program

Program Description: *The Physics Laboratory (PL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Electron and Optical Physics, Atomic Physics, Optical Technology, Ionizing Radiation, Time and Frequency, and Quantum Physics.

All proposals submitted to the Physics Laboratory Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Physics Laboratory Office, 840 – Support may be provided to conferences, workshops, or other technical research meetings that are relevant to the mission of the Physics Laboratory. Support is generally provided in increments of $5,000 per award.

B. Electron and Optical Physics Division, 841--The primary objective is to supplement division activities in characterization of nanometer-scale electronic and magnetic structures and characterization of EUV optical components to support semiconductor lithography and ultraviolet radiometric metrology and to support ongoing activities in Bose-Einstein condensation and quantum information. The contact person for this division is Dr. Charles W. Clark and he may be reached at (301) 975-3709.

C. Atomic Physics Division, 842--The primary objective is to support division programs aimed at determining basic atomic properties and developing new metrology techniques in atomic spectroscopy, quantum processes, plasma radiation, laser cooling and trapping, and quantum metrology. The contact person for this division is Dr. Carl J. Williams and he may be reached at (301) 975-3200.

D. Optical Technology Division, 844--The primary objective is to develop, improve, and maintain national standards for radiation thermometry, spectroradiometry, photometry, and spectrophotometry and to conduct basic theoretical and experimental research on the photophysical and photochemical properties of materials, in radiometric and spectroscopic techniques and instrumentation, and in the application of optical technologies. The contact person for this division is Dr. Albert C. Parr and he may be reached at (301) 975-2316.

E. Ionizing Radiation Division, 846--The primary objective is to provide primary standards, measurement methods, and technology to support the Division's work in meeting national needs in radiation interactions and dosimetry, neutron interactions and dosimetry, and radioactivity, including both theoretical/experimental and applied research programs in support of Industry, Health Care, and Homeland Security. The contact person for this division is Dr. Lisa R. Karam and she may be reached at (301) 975-5561.

F. Time and Frequency Division, 847--The primary objective is to supplement division basic and applied research programs in the areas of time and frequency standards, phase noise measurements, network synchronization, ion storage, quantum information, atomic standards and optical frequency measurements in support of future standards, chip-scale atomic clocks, time and frequency dissemination services, support of time and frequency applications such as navigational systems and telecommunications, and measurement methods. The contact person for this division is Dr. Thomas R. O'Brian and he may be reached at (303) 497-4570.

Materials Science and Engineering Laboratory Grants Program

Program Description: *The Materials Science and Engineering Laboratory (MSEL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Ceramics; Metallurgy; Polymer Sciences; Materials Reliability; and Neutron Scattering Research and Spectroscopy.

All proposals submitted to the MSEL Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Laboratory Office, 850--The primary objective is to supplement Materials Science and Engineering Laboratory activities of importance to materials science generally, including portions of Federal research and development programs performed in concert with other Federal agencies; and theoretical and computational materials science.

The contact person for the Laboratory Office is: Dr. Stephen W. Freiman and he may be reached at (301) 975-5658 or by e-mail at
stephen.freiman@nist.gov

B. Ceramics Division, 852--The primary objective is to supplement division activities in the areas of nanomechanical properties, electronic and optoelectronic materials, x-ray structural characterization methods, and materials property information systems and evaluation methodologies. The contact person for this division is: Dr. Ronald Munro and he may be reached at (301) 975-6127 or by e-mail at ronald.munro@nist.gov.

C. Materials Reliability Division, 853--The primary objective is to supplement division activities in the metrology of microelectronic and optoelectronic structures, thin films and nanostructures, and biomaterials. The contact person for this division is: Dr. Thomas Siewert and he may be reached at (303) 497-3523 or by e-mail at siewert@boulder.nist.gov.

D. Polymers Division, 854--The primary objective is to support division programs in electronics materials, biomaterials, combinatorial methods, nano-structured materials and processing characterization through participation in research on metrology, synthesis, processing and characterization of structure, mechanical, thermal and electrical properties. The contact person for this division is: Dr. Kalman Migler and he may be reached at (301) 975-876 or by e-mail at **kalman.migler@nist.gov**.

E. Metallurgy Division, 855--The primary objective is to support division programs in magnetic materials, combinatorial methods, computational materials science, mechanics of materials, nanostructured materials and processing, and electronic materials. The contact person for this division is: Dr. Frank W. Gayle and he may be reached at (301) 975-6161 or by e-mail at frank.gayle@nist.gov.

F. NIST Center for Neutron Research, 856--The primary objective is to develop high resolution cold and thermal neutron scattering research approaches and related physics, chemistry, macromolecular and materials applications. Awards to universities for participation by university students in the NIST/NSF Center for High resolution Scattering are also funded under this program. The contact person for this division is:
Dr. Dan Neumann and he may be reached at (301) 975-5252 or by e-mail at dan.neumann@nist.gov.

Building Research Grants and Cooperative Agreements Program

Program Description: *The Building Research Grants and Cooperative Agreements Program* will provide grants and cooperative agreements in the following fields of research: Structures, Construction Metrology and Automation, Inorganic Materials, Polymeric Materials, HVAC & R Equipment Performance, Mechanical Systems and Controls, Heat Transfer and Alternative Energy Systems, Computer Integrated Building Processes, and Indoor Air Quality and Ventilation.

The Building Research Grants and Cooperative Agreements Program supports the formal mission of the Building and Fire Research Laboratory, which is to meet the measurement and standards needs of the Building and Fire communities. All proposals submitted must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Materials and Construction Research Division, 861--The primary objective is to support laboratory programs in the areas of Structures, Construction Metrology and Automation, Inorganic Materials, and Polymeric Materials (including safety, security, and sustainability of building and physical infrastructure, service-life performance of building materials, and construction cycle time reductions). The contact person for this division is: Mr. James St. Pierre, and he may be reached at (301) 975-4124.

B. Building Environment Division, 863--The primary objective is to support laboratory programs in the areas related to the dissemination of Critical Building Information to First Responders, security issues related to ASHRAE's BACnet protocol, secure and reliable BACnet/electric utility communications, biometric applications in building automation systems, information representation and exchange and access methods for building commissioning and operations, life-cycle information management in buildings, computer integrated building processes and services, and indoor air quality modeling and simulation. The contact person for this division is: Dr. George E. Kelly, and he may be reached at (301) 975-5850. For details on these various activities, please see the Building and Fire Research Laboratory Web site at http://www.bfrl.nist.gov. Note that documents describing the current programs for the two technical divisions are available through the homepage.

Fire Research Grants Program

Program Description: *The Fire Research Grants Program* will provide funding for innovative ideas in the fire research area generated by the proposal writer, who chooses the topic and approach.

The program description and objectives for the Fire Research Grants Program are as follows:

A. Analysis and Prediction Group: The objectives are to develop understanding and predictive methods for dynamic fire phenomena to advance fire science and engineering practice and to perform research into the heat and mass transfer processes occurring in fires in order to improve predictions of (1) the growth, spread, and suppression of fires; (2) the reaction of structures to fires; and (3) emissions transport from fires of all scales. Experiments and metrology are developed and used to support and verify advanced computer simulations of fire phenomena, fire hazards, fire protection, and fire fighting. The contact person for this group is: Dr. Anthony Hamins, and he may be reached at (301) 975-6598.

B. Fire Metrology Group: The objective is to apply measurement science in the development and quantification of experimental methods and to apply these measurement methods, supplemented by theoretical analyses, to understanding fire phenomena, and the reaction of materials and structures to fire. Current areas of emphasis are understanding the effects of soot volume fraction, temperature, and soot optical properties on the radiant flux in a fire environment, developing a quality facility for heat release rate measurements, instituting large field optical diagnostics for the characterization of fire induced flows, and measuring deformation and stress of structural members in a fire. The contact person for this group is: Dr. Jiann Yang, and he may be reached at (301) 975-6662.

C. Fire Fighting Technology Group: The objectives are to conduct research that enables advances in fire fighter safety, fire ground operations, and effectiveness of the fire service; that develop and apply measurements, modeling, and technology, and improve the understanding of the behavior, prevention and control of fires to enhance fire fighting operations and equipment, fire suppression, fire investigations, and disaster response; and that provide input, including experimental data, fire modeling and test protocols, to advance the effectiveness of fire safety standards and codes. The contact person for this group is Mr. Nelson Bryner, and he may be reached at (301) 975-6868.

D. Materials and Products Group: The objective is to perform research enabling the confident development by industry of new, less-flammable materials and products. This capability is based on understanding fundamentally the mechanisms that control the ignition, flame spread and burning rate of materials, as well as the chemical and physical characteristics that affect these aspects of flammability. This includes (1) developing methods of measuring the response of a material to fire conditions that enable assured prediction of the full-scale performance of the final product; (2) developing computational molecular dynamics and other mechanistic approaches to understand flame retardant mechanisms and the effects of polymer chemical structure on flammability; (3) characterizing the burning rates of charring and non-charring polymers and composites; and (4) delineating and modeling the enthalpy and mass transfer mechanisms of materials combustion. A fifth area of interest is fundamental materials studies to advance the development of inorganic and organic structural fire protective coatings and materials. Prediction and measurement of thermal/mechanical properties, durability, adhesion, and cohesion under fire conditions and long-time environmental exposure are of interest. The contact person for this group is Dr. Marc Nyden, and he can be reached at (301) 975-6692.

E. Integrated Performance Assessment Group: The objectives are to create and disseminate enhanced data, develop fundamental understanding of fire and emergency phenomena, and support computer modeling and prediction of (1) fire detection and building fire systems; (2) human behavior and egress during building (fire) emergencies; (3) toxicity of combustion products; (4) fire hazard and risk assessment; (5) decision analysis; (6) fire fighting operations and training; and (6) fire investigation. Modeling and enhanced data are used to conduct performance evaluation and design of fire protection systems in buildings and to quantify and reduce uncertainty in model predictions. Enhanced data is disseminated through development of multi-medial web-enabled databases. The content and process associated with the building and fire codes and standards system is another current area of focus. In recent decades, tremendous advances have been made in computing, measurement, and information technologies, as well as in the ability to predict various aspects of building life cycle performance. Current approaches to building quality assurance, including public health and safety regulation of buildings, are based on a long history of codes and standards. These, in turn, rest on a number of assumptions, many implicit, about the extent to which building performance or risk can be measured or predicted, and the means for doing so. What is desired is a theoretical basis for an examination of the entire subject of quality control of buildings over

their entire life cycles, as a framework for analysis of the opportunities for the use of advances in technology to improve the reliability and cost-effectiveness of building quality control measures. In particular, NIST is interested in funding academic research at the Masters or Ph.D. thesis level in one or more of the following areas: (1) Development of a theoretical framework for building life cycle quality assurance and an analysis of the relative effectiveness of our building and fire codes system; (2)establishment of a theoretical basis for development of alternative strategies for building life cycle quality assurance, including public health and safety regulation of buildings; and (3) an analysis of the potential impacts of application of advances of measurement, information, computing and building technologies to building life cycle quality and safety assurance. The contact person for this group is: Dr. William Davis, and he can be reached at (301) 975-6884.

Information Technology Laboratory Grants Program

Program Description: *The Information Technology Laboratory Grants Program* will provide grants and cooperative agreements in the broad areas of mathematical and computational sciences, advanced network technologies, and information access. Specific objectives of interest in these areas of research include: quantum information theory, computational materials science, computational nanotechnology, mathematical knowledge management, visual data analysis, verification and validation of computer models, software testing, human-robot interaction, human factors in voting systems, security for the IPv6 transition from and coexistence with IPv6, and device mobility among heterogeneous networks. For details on these various activities, please see the Information Technology Laboratory web site at http://www.itl.nist.gov.

Additionally, the ITL Grant Program will provide grants and cooperative agreements in support of conferences, workshops, and other technical research groups that focus on trends and future focus areas of information technology.

Contact the *Information Technology Laboratory Grant Program Manager:* Kirk Dohne, (301) 975-8480, kirk.dohne@nist.gov for clarification of the program objectives.

b. Award Information:

The funding instruments used in these programs will be grants and cooperative agreements, as appropriate. Where cooperative agreements are used, the nature of NIST's "substantial involvement" will generally be collaboration with the recipient by working jointly with a recipient scientist in carrying out the scope of work, or specifying direction or redirection of the scope of work due to inter-relationships with other projects requiring such cooperation.

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Electronics and Electrical Engineering Laboratory Grants Program*, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2005, the *EEEL Grants Program* made 13 new awards, totaling $866,613. The amount available each year fluctuates considerably based on programmatic needs and funding availability. Individual awards are expected to range between $5,000 and $150,000.

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program*, proposals will be considered for research projects from one to five years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the MEL program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2005, the *MEL Grants Program* funded 11 new awards, totaling $834,342. In fiscal year 2006 the *MEL Grants Program* anticipates funding of approximately $500,000, including new awards and continuing projects. Individual awards are expected to range from approximately $25,000 to $300,000.

Chemical Science and Technology Laboratory Grant Program

For the *Chemical Science and Technology Laboratory Grant Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the Chemical Science and Technology Laboratory program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e. the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

No funds have been set aside specifically for support of the *CSTL Grants Program*. The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by individual divisions within the laboratory. Where funds are identified as available for grants, those funds will be awarded to highly ranked proposals as determined by the process described in this notice.

In fiscal year 2005, the *CSTL Grants Program* funded 10 new awards, totaling $830,254. In fiscal year 2006, the *CSTL Grants Program* anticipates funding of approximately $500,000. Individual awards are expected to range from approximately $5,000 to $100,000.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, proposals will be considered for research projects from one to five years. When a proposal for a multi-year project is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the Physics Laboratory program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2005, the *PL Grants Program* funded 21 new awards, totaling $2,274,427. In fiscal year 2006, the *PL Grants Program* anticipates funding of approximately $1,700,000, including new awards and continuing projects. Funding availability will be apportioned by quarter. Individual awards are expected to range from approximately $5,000 to $300,000.

Materials Science and Engineering Laboratory Grants Program

For the *MSEL Grants Program,* proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the MSEL program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2005, the *MSEL Grants Program* funded 36 new awards, totaling $4,966,802. In fiscal year 2006, the *MSEL Grants Program* anticipates funding of approximately $4,500,000, including new awards and continuing projects. Most grants and cooperative agreements are expected to be in the $25,000 to $100,000 per year range.

Building Research Grants and Cooperative Agreements Program

For the *Building Research Grants and Cooperative Agreements Program,* proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Building Research Grants and Cooperative Agreements Program*, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2005, the *Building Research Grants and Cooperative Agreements Program* funded 4 new awards, totaling $603,964. No funds have been set aside specifically for support of the Building Research Grants and Cooperative Agreements Program. The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by the individual divisions. The amount available each year fluctuates considerably based on programmatic needs. Individual awards are expected to range between $5,000 and $150,000.

Fire Research Grants Program

For the *Fire Research Grants Program,* proposals will be considered for research projects from one to three years. When a proposal for a multi-year project is approved, funding will normally be provided for only the first year of the program. If an application is selected for funding, DoC has no obligation to provide any additional future funding in connection with that award. Funding for each subsequent year of a multi-year proposal will be contingent on satisfactory progress, continuing relevance to the mission of the NIST Fire Research Program, and the availability of funds.

For the *Fire Research Grants Program,* the annual budget is approximately $1.0 to $1.5 million. Because of commitments for the support of multi-year projects and because proposals may have been deferred from the previous year's competition, only a portion of the budget is available to fund applications received in response to this notice. Most grants and cooperative agreements are in the $25,000 to $125,000 per year range, with a maximum requested duration of three years. In fiscal year 2005, the *Fire Research Grants Program* funded 8 new awards, totaling $620,224.

Information Technology Laboratory Grants Program

For the *Information Technology Laboratory Grants Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any

additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Information Technology Laboratory Grants Program*, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2005, the *Information Technology Laboratory* did not participate in the grants program; therefore no historical data is available for that period. No funds have been set aside specifically for support of the *Information Technology Laboratory Grants Program.* The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by the individual divisions. The amount available each year fluctuates considerably based on programmatic needs. Individual awards are expected to range between $10,000 and $150,000.

c. Eligibility Information

All programs listed in this funding opportunity notice are open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

Cost Sharing or Matching: There is no cost sharing or matching requirements for the programs listed in this funding opportunity notice.

d. Application and Submission Information

Address to Request Application Package: Complete application packages may be obtained by contacting the below named offices and personnel.

Electronics and Electrical Engineering Laboratory Grants Program

Paper applications must be submitted to: Sheilda Bryner, Electronics and Electrical Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8100, Gaithersburg, MD 20899-8100. Electronic applications and associated proposal information should be uploaded to grants.gov.

Manufacturing Engineering Laboratory Grants Program

Paper applications must be submitted to: Mrs. Mary Lou Norris, Manufacturing Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8200, Building 220, Room B322, Gaithersburg, Maryland 20899-8200.

Chemical Science and Technology Laboratory Grants Program

Paper applications must be submitted to: Dr. William F. Koch, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8300, Gaithersburg, MD 20899-8300.

Physics Laboratory Grants Program

Paper applications must be submitted to: Ms. Anita Sweigert, Physics Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8400, Gaithersburg, MD 20899-8400.

Materials Science and Engineering Laboratory

Paper applications must be submitted to: Dr. Stephen W. Freiman, Materials Science and Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8500, Gaithersburg, Maryland 20899-8500.

Building Research Grants and Cooperative Agreements Program

Paper applications must be submitted to: Karen Perry, Building and Fire Research Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8602, Gaithersburg, MD 20899-8602.

Fire Research Grants Program

Paper applications must be submitted to: Ms. Wanda Duffin-Ricks, Building and Fire Research Laboratory (BFRL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8660, Gaithersburg, Maryland 20899-8660.

Information Technology Laboratory Grants Program

Paper applications must be submitted to: Kirk Dohne, Information Technology Laboratory (ITL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8900, Gaithersburg, Maryland 20899-8900.

The following **applies to ALL programs** listed in this funding opportunity notice:

For electronic submission - Applicants should follow the Application Instructions provided at Grants.gov when submitting a response to this funding opportunity. Applicants are encouraged to start early and not wait to the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov.

2. Content and Form of Application Submission:

The following **applies to ALL programs** listed in this funding opportunity notice:

Complete applications/proposals must include the following forms and documents:

- SF-424, Application for Federal Assistance
- SF-424A, Budget Information Non-Constructions
- SF-424B, Assurances Non-Construction
- CD-511, Certification Regarding Lobbying
- CD-346, Applicant for Funding Assistance (IF APPLICABLE)
- SF-LLL, Disclosure of Lobbying Activities (IF APPLICABLE)
- Technical Proposal responsive to program description(s)
- Budget Narrative

Proposals that are submitted without a technical proposal and/or a budget narrative will be rejected. Applicant is responsible for ensuring that the application, rather submitted via Gants.gov or otherwise it is complete and that it conforms to the requirements of this notice.

IN AN EFFORT TO ROUTE THE APPLICATION TO THE APPROPRIATE PROGRAM OFFICIALS, APPLICANTS SHOULD INCLUDE ON THE COVER PAGE OF THE TECHNICAL PROPOSAL THE NAME OF THE GRANT AND/OR COOPERATIVE AGREEMENT PROGRAM AGAINST WHICH THEY ARE APPLYING. THE CHOICES ARE:

(1) Electronics and Electrical Engineering Laboratory (EEEL);
(2) Manufacturing Engineering Laboratory (MEL);
(3) Chemical Science and Technology Laboratory (CSTL);
(4) Physics Laboratory;
(5) Materials Science and Engineering Laboratory (MSEL);
(6) Building Research Program;
(7) Fire Research Program; and
(8) Information Technology Laboratory Program (ITL)

3. Submission Dates and Times:

MEL, CSTL, Physics, MSEL, ITL and Building Research Grants and Cooperative Agreements Programs

All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Standard Time on September 30, 2006. Proposals received between July 1, 2006 and September 30, 2006 may be processed and considered for funding under this solicitation in the next fiscal year, subject to the availability of funds.

EEEL Grants and Cooperative Agreements Programs

All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Standard Time on June 30, 2006.

Fire Research Grants Program

All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Standard Time on September 30, 2006. Proposals received between May 1, 2006 and September 30, 2006 will be processed and considered for funding under this solicitation, but if selected, proposals may be funded in the next fiscal year, subject to the availability of funds.

4. Intergovernmental Review: Executive Order 12372: Applications under this program are not subject to Executive Order 12372, ``Intergovernmental Review of Federal Programs."

5. Funding Restrictions: Not applicable.

6. Other Submission Requirements: None

e. Application Review Information

1. Criteria:

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, the evaluation criteria and weights to be used by the technical reviewers in evaluating the proposals are as follows:

Proposal addresses specific program objectives as described in this notice (25%);
Proposal provides evidence of applicant's expertise in relevant technical area (20%);
Proposal offers innovative approach (20%);
Proposal provides realistic schedule with defined milestones (20%);
Proposal provides adequate rationale for budget (15%).

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of manufacturing engineering and metrology research.

3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

Chemical Science and Technology Laboratory Grants Program

For the *Chemical Science and Technology Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of measurement science, especially as it pertains to reference methods, reference materials and reference data in Chemical Science and Technology.

   Each of these factors will be given equal weight in the evaluation process.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of physics.

   Each of these factors will be given equal weight in the evaluation process.

Materials Science Engineering Laboratory Grants Program

For the *MSEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of materials science and engineering and neutron research.

Each of these factors will be given equal weight in the evaluation process.

Building Research Grants and Cooperative Agreement Program

The Divisions of the Building Research will score proposals based on the following criteria and weights:

1. Technical quality of the research. Reviewers will assess the rationality, innovation and imagination of the proposal and the fit to NIST's in-house building research programs. (0 – 35 points);

2. Potential impact of the results. Reviewers will assess the potential impact and the technical application of the results to our in-house programs and the building industry. (0 – 25 points);

3. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 – 20 points);

4 .Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 – 20 points).

Fire Research Grants Program

For the *Fire Research Grants Program*, the technical evaluation criteria are as follows:

1. Technical quality of the research. Reviewers will assess the rationality, innovation and imagination of the proposal. (0 - 35 points);

2. Potential impact of the results. Reviewers will assess the potential impact and the technical application of the results to the fire safety community. (0 - 25 points);

3. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 - 20 points);

4. Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 - 20 points).

Information Technology Laboratory Grants Program

For the *ITL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of manufacturing engineering and metrology

research.

3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

2. Review and Selection Process:

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, proposals will be reviewed in a three-step process. First, the EEEL Grants Coordinator, or the Deputy Director of EEEL, will determine the compatibility of the applicant's proposal with EEEL Program Areas and the relevance to the objectives of the *Electronics and Electrical Engineering Laboratory Grants Program*, described in the Program Description section above. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. If it is determined that all funds available for the *EEEL Grants Program* for the given fiscal year have been exhausted, the proposal will not be reviewed for technical merit. Proposers may contact EEEL at 301-975-2220 t to find out if funds have been exhausted for the fiscal year. EEEL will also post a notice on its web site, http://www.eeel.nist.gov/eeel_grants/, when funds are exhausted for the fiscal year. EEEL will notify proposers in writing if their proposals are not reviewed for technical merit.

Second, proposals will be distributed for technical review by the EEEL Grants Coordinator, or other technical professionals familiar with the programs of the Electronics and Electrical Engineering Laboratory, to the appropriate Division or Office based on technical area. At least three independent, objective individuals knowledgeable about the particular scientific area described in the Program Description section above that the proposal addresses will conduct a technical review of each proposal, based on the evaluation criteria described above. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Reviews will be conducted on a quarterly basis, and all proposals received during the quarter will be ranked based on the reviewers' scores.

Third, the Division Chief or Office Director will make application selections. In making application selections, the Division Chief or Office Director will take into consideration the results of the reviewers' evaluations, the availability of funding, and relevance to the objectives of the *Electronics and Electrical Engineering Laboratory Grants Program*, as described in the Program Description section above. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program* responsive proposals will be assigned, as received on a rolling basis, to the most ppropriate area for review. At least three independent, objective individuals knowledgeable about the particular scientific area described in the Program Description section above that the proposal addresses will conduct a technical review of proposals based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may

discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. The Division Chief or Laboratory Director will make application selections. In making application selections, the Division Chief or Laboratory Director will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives of the *MEL Grants Program.* These objectives are described above in the Program Description section above. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The original application will be returned to the applicant.

Chemical Science and Technology Laboratory Grants Program

For the *Chemical Science and Technology Laboratory Grants Program*, proposals will be reviewed in a three-step process. First, the Deputy Director of CSTL, or appropriate CSTL Division Chief, will determine the compatibility of the applicant's proposal with CSTL Program Areas and the relevance to the objectives of the *Chemical Science and Technology Laboratory Grants Program*, described in the Program Description section above. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit.

Second, at least three independent, objective individuals knowledgeable about the particular measurement science area described in the section above that the proposal addresses will conduct a technical review of each proposal, based on the evaluation criteria described above. Reviews will be conducted on a quarterly basis, subject to the availability of funds, and all responsive, complete proposals received and reviewed since the last quarter will be ranked based on the reviewers' scores. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Third, the Division Chief will make application selections, taking into consideration the results of the reviewers' evaluations, the availability of funds, and the relevance of the proposal to the program objectives described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, responsive proposals will be considered as follows: First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the proposal will conduct a technical review of each proposal, based on the evaluation criteria described the Criteria section above. Reviews will be conducted on a monthly basis within each division of the Physics Laboratory, and all proposals received during the month will be ranked based on the reviewers' scores. If non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Next, the Division Chief will make final application selections, taking into consideration the results of the reviewers' evaluations, including rank; the compilation of a slate that, when taken as a whole, is likely to best further the program interests described in the Program Description section above; and the availability of funds.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible.

Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award.

The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Material Sciences and Engineering Laboratory Grants Program

For the *MSEL Grants Program* proposals will be reviewed in a two-step process. First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the Program Description section above that the proposal addresses will conduct a technical review of proposals, as they are received on a rolling basis, based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Second, the Division Chief or Center Director or Laboratory Deputy Director will make application selections. In making application selections, the Division Chief or Center Director or Laboratory Deputy Director will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives of the MSEL Grants Program, described above in the Program Description section. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Building Research Grants and Cooperative Agreements Program

All applications received in response to this announcement will be reviewed to determine whether or not they are complete and responsive. Incomplete or non-responsive applications will not be reviewed for technical merit. The Program will retain one copy of each non-responsive application for three years for recordkeeping purposes. The remaining copies will be destroyed.

Responsive proposals will be forwarded to the appropriate Division Chief, who will assign them to appropriate reviewers. At least three independent, objective individuals knowledgeable about the particular scientific area described in the Program Description section above that the proposal addresses will conduct a technical review of each proposal, based on the evaluation criteria described above. When non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Reviews will be conducted no less than once per quarter, and all proposals since the last review session will be ranked based on the reviewers' scores.

Next, the Division Chief, Laboratory Deputy Director, or Laboratory Director will make application selections. In making application selections, the Division Chief, Laboratory Deputy Director, or Laboratory Director will take into consideration the results of the evaluations, the scores of the reviewers, the availability of funds, and relevance to the objectives of the *Building Research Grants and Cooperative Agreements Program*, as described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants

Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Fire Research Grants Program

Prospective proposers are encouraged to contact the group leaders listed in the FFO announcement to determine the responsiveness of the proposal and compliance with program objectives prior to preparation of a detailed proposal. Responsive proposals will be assigned, as received on a rolling basis, to the most appropriate group. Proposals are evaluated for technical merit based on the evaluation criteria described above by at least three reviewers chosen from NIST professionals, technical experts from other interested government agencies, and experts from the fire research community at large. When non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. The group leaders will make funding recommendations to the Division Chief based on the technical evaluation score and the relationship of the work proposed to the objectives of the program.

In making application selections, the Division Chief will take into consideration the results of the evaluations, the scores of the reviewers, the group leader's recommendation, the availability of funds, and relevance to the objectives of the *Fire Research Grants Program*, as described in the Program Description section above. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Information Technology Laboratory Grants Program

For the *Information Technology Laboratory (ITL) Grants Program*, proposals will be reviewed in a three-step process. First, the Deputy Director of ITL, or appropriate designee, will determine the compatibility of the applicant's proposal with ITL Program Areas and the relevance to the objectives of the *ITL Grants Program*, described in the Program Description section above. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. If a proposal is determined to be incomplete or non-responsive, or if it is determined that all available funds have been exhausted, the proposal will not be reviewed for technical merit. Proposers may contact ITL at 301-975-8480 to find out if funds have been exhausted for the fiscal year. ITL will also post a notice on its web site, www.itl.nist.gov, when funds are exhausted for the fiscal year. ITL will notify proposers in writing if their proposals are not reviewed for technical merit.

Second, at least three independent, objective individuals knowledgeable about the particular measurement science area described in the section above that the proposal addresses will conduct a technical review of each proposal, based on the evaluation criteria described above. Reviews will be conducted on a quarterly basis, and all responsive, complete proposals received and reviewed since the last quarter will be ranked based on the reviewers' scores. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Third, the Division Chief, in accord with the Director of ITL, will make application selections, taking into consideration the results of the reviewers' evaluations, the availability of funds, and the relevance of the proposal to the program objectives described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, compliance with Federal policies that best further the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

3. Anticipated Announcement and Award Dates: Awards will be made approximately 90 days after the end of the review cycle. See information in Dates section regarding awards made in a subsequent fiscal year.

f. Award Administration Information

1. Award Notices: Successful finalists will receive a grant or cooperative agreement award document from the Grant Officer. The document will be mailed via surface mail in triplicate. The recipient should have an authorized official at the organization sign and return two copies to the address listed in the award document. The award document will also include the standard terms and conditions, general terms and conditions (if any), and special award conditions (if any) that are applicable.

2. Administrative and National Policy Requirements: The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements: The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register Notice of December 30, 2004 (69 FR 78389) is applicable to this announcement. On the form SF-424, the applicant's 9-digit Dun and Bradstreet Data Universal Numbering System (DUNS) number must be entered in the Applicant Identifier block.

Collaborations with NIST Employees: All applications should include a description of any work proposed to be performed by an entity other than the applicant, and the cost of such work should ordinarily be included in the budget.

If an applicant proposes collaboration with NIST, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known. Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the proposal prior to the merit review.

Use of NIST Intellectual Property: If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described at 35 U.S.C. sec. 200-212, 37 CFR part 401, 15 CFR 14.36, and in section 20 of the Department of Commerce Pre-Award Notification Requirements, 66 FR 49917 (2001), as amended by the Federal Register notice published on October 30, 2002 (67 FR 66109). Questions about these requirements may be directed to the Counsel for NIST, 301-975-2803.

Any use of NIST-owned intellectual property by a proposer is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this notice, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

Initial Screening of all Applications: All applications received in response to this announcement will be reviewed to determine whether or not they are complete and responsive to the scope of the stated objectives for each program. Incomplete or non-responsive applications will not be reviewed for technical merit. The Program will retain one copy of each non-responsive application for three years for record keeping purposes. The remaining copies will be destroyed.

Paperwork Reduction Act: The standard forms in the application kit involve a collection of information subject to the Paperwork Reduction Act. The use of Standard Forms 424, 424A, 424B, SF-LLL, and CD-346 have been approved by OMB under the respective Control Numbers 0348-0043, 0348-0044, 0348-0040, 0348-0046, and 0605-0001. The use of the Student Application Information sheet has been approved by OMB under Control Number 0693-0042.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

Research Projects Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects: Any proposal that includes research involving human subjects, human tissue, data or recordings involving human subjects must meet the requirements of the Common Rule for the Protection of Human Subjects, codified for the Department of Commerce at 15 CFR part 27. In addition, any proposal that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, FDA, and other Federal agencies on these topics, and all Presidential statements of policy on these topics.

NIST will accept the submission of human subjects protocols that have been approved by Institutional Review Boards (IRBs) possessing a current, valid Multiple Project Assurance (MPA) or Federal-wide Assurance (FWA) from DHHS. NIST will not issue a single project assurance (SPA) for any IRB reviewing any human subjects protocol proposed to NIST.

On August 9, 2001, the President announced his decision to allow Federal funds to be used for research on existing human embryonic stem cell lines as long as prior to his announcement (1) the derivation process (which commences with the removal of the inner cell mass from the blastocyst) had already been initiated and (2) the embryo from which the stem cell line was derived no longer had the possibility of development as a human being. NIST will follow guidance issued by the National Institutes of Health at http://ohrp.osophs.dhhs.gov/humansubjects/guidance/stemcell.pdf for funding such research.

Research Projects Involving Vertebrate Animals: Any proposal that includes research involving vertebrate animals must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals" which can be obtained from National Academy Press, 2101 Constitution Avenue, NW., Washington, DC 20065. In addition, such proposals must meet the requirements of the Animal Welfare Act (7 U.S.C. 2131 et seq.), 9 CFR parts 1, 2, and 3, and if appropriate, 21 CFR part 58. These regulations do not apply to proposed research using pre-existing images of animals or to research plans that do not include live animals that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks.

Executive Order 12866: This funding notice was determined to be not significant for purposes of Executive Order 12866.

Executive Order 13132 (Federalism): It has been determined that this notice does not contain policies with

federalism implications as that term is defined in Executive Order 13132.

Administrative Procedure Act/Regulatory Flexibility Act: Notice and comment are not required under the Administrative Procedure Act (5 U.S.C. 553) or any other law, for rules relating to public property, loans, grants, benefits or contracts (5 U.S.C. 553 (a)). Because notice and comment are not required under 5 U.S.C. 553, or any other law, for rules relating to public property, loans, grants, benefits or contracts (5 U.S.C. 553(a)), a Regulatory Flexibility Analysis is not required and has not been prepared for this notice, 5 U.S.C. 601 et seq

3. Reporting: Successful finalists will be required to submit, on a semi-annual basis for the periods ending March 31 and September 30 of each year, a technical progress report and a SF-269, Financial Status Report. From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the recipient may need to submit property and patent reports.

g. Agency Contact(s):

EEEL

Program questions should be addressed to Sheilda Bryner, Electronics and Electrical Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8100, Gaithersburg, MD 20899-8100, Tel.: (301) 975-2220, Fax: (301) 975-4091.

MEL

Program questions should be addressed to Mrs. Mary Lou Norris, Manufacturing Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8200, Building 220, Room B322, Gaithersburg, Maryland 20899-8200, Tel: (301) 975-3400, E-mail: mnorris@nist.gov.

CSTL

Program questions should be addressed to Dr. William F. Koch, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8300, Gaithersburg, MD 20899-8300, Tel (301) 975-8301, E-Mail: william.koch@nist.gov.

Physics Grants Program

Program questions should be addressed to Ms. Anita Sweigert, Physics Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8400, Gaithersburg, MD 20899-8400, Tel (301) 975-4200, E-Mail: anita.sweigert@nist.gov. It is strongly suggested to first confirm the program objectives with the Program Manager prior to preparing a detailed proposal.

Materials Science and Engineering Laboratory Grants Program

Program questions should be addressed to Dr. Stephen W. Freiman, Materials Science and Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8500, Gaithersburg, Maryland 20899-8500, Tel: (301) 975-5658, E-mail: stephen.freiman@nist.gov.

Building Research Grants Program

Program questions should be addressed to Karen Perry, Building and Fire Research Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8602, Gaithersburg, MD 20899-8602, Tel.: (301) 975-5910, karen.perry@nist.gov, Fax: (301) 975-4032, and web site http://www.bfrl.nist.gov.

Fire Research Grants Program

Program questions should be addressed to Ms. Wanda Duffin-Ricks, Building and Fire Research Laboratory (BFRL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8660, Gaithersburg, Maryland

20899-8660, Tel: (301) 975-6863, E-mail: wanda.duffin@nist.gov, Website: http://www.bfrl.nist.gov.

Information Technology Laboratory Grants Program
Program questions should be addressed to Kirk Dohne, Information Technology Laboratory (ITL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8900, Gaithersburg, MD 20899-8900, Tel.: (301) 975-8480, kirk.dohne@nist.gov, Fax: (301) 975-2378, website: http://www.itl.nist.gov. It is strongly suggested to first confirm the program objectives with the Program Manager prior to preparing a detailed proposal.

The following **applies to ALL programs** listed in this funding opportunity notice:

All grants related administration questions concerning this program should be addressed to: Joyce Brigham, NIST Grants and Agreements Management Division, (301) 975-6328; joyce.brigham@nist.gov. For assistance with using Grants.gov contact support@grants.gov.

Instructions for Applying for the NIST Announcement 2006-SGP-01:

Applicants should download and complete the package that is provided with this Federal Funding Opportunity notice.

The following forms are available as part of the Grants.gov application kit and can be completed through the download application process.

SF-424, Applications for Federal Assistance
SF-424A, Budget Information Non-Construction Programs
SF-424B, Assurances Non-Construction Programs
SF-LLL, Disclosure of Lobbying Activities
CD-511, Certification Regarding Lobbying

In order for an application to be considered complete it must meet all the application documentation requirements stated in the Federal Funding Opportunity notice.

IN AN EFFORT TO ROUTE THE APPLICATION TO THE APPROPRIATE PROGRAM OFFICIALS, APPLICANTS SHOULD INCLUDE ON THE COVER PAGE OF THE TECHNICAL PROPOSAL THE NAME OF THE GRANT AND/OR COOPERATIVE AGREEMENT PROGRAM AGAINST WHICH THEY ARE APPLYING. THE CHOICES ARE:

(1) Electronics and Electrical Engineering Laboratory (EEEL);
(2) Manufacturing Engineering Laboratory (MEL);
(3) Chemical Science and Technology Laboratory (CSTL);
(4) Physics Laboratory;
(5) Materials Science and Engineering Laboratory (MSEL);
(6) Building Research Program;
(7) Fire Research Program; and
(8) Information Technology Laboratory Program (ITL)

Applicant may choose to scan or create the necessary documents and then attach them to the application in Grants.gov. **The following form that may be required is not available on Grants.gov:**

CD-346, Applicant for Funding Assistance

The CD-346, Applicant for Funding Assistance is not available within the Grants.gov application package however it can be found at www.doc.gov/forms. The form can be completed and attached to the application. A wet signature copy of the the CD-346 will be required before an award will be made to the successful applicants.

If you choose to apply via Grants.gov all requirements of the application must be included.

For further information or questions regarding applying electronically for the 2006-SGP-01 announcement please contact Sue Li at sue.li@nist.gov or Christopher Hunton at 301-975-5718 or Christopher.hunton@nist.gov.